Richard Shi | Software Developer

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Education

University of Waterloo
Candidate for Bachelor's of Applied Sciences   *Ongoing Third Year*
Computer Engineering

Skills

Embedded: C, C++, Linux

Data: Python 3, Postgres, Redis, Cassandra

Full Stack: HTML, CSS, Node.js, Backbone

Mobile: Swift, Objective-C, Java

Work Experience

Hubdoc   **FinTech startup**
Software Engineer   *Sept 2017–Dec 2017*
- Created and optimized hundreds of Node microservices in a small team to automate financial data aggregation for accountants, earning $300,000+ in monthly revenue
- Designed and upgraded a responsive data visualization dashboard with Express, Backbone and PostgreSQL for enabling advanced analytics solutions
- Improved microservice fetch success rate from 58% to 80%

Rave Media   **Social Media startup**
iOS Software Engineer   *Jan 2017–April 2017*
- Built a novel asynchronous networking layer for the Rave social video app in Swift, reducing latency by 14%
- Redesigned and optimized memory management of the app, reducing usage by 73%
- Implemented new build system to cut build times and enable Swift frameworks

Blackberry   **Mobile Device Division**
Firmware Engineer   *May 2016–Aug 2016*
- Developed Android OS Camera enhancements in C++ including a dynamic performance adjuster, enabling a 3X video resolution increase at minimal performance loss
- Optimized Android camera drivers for the Blackberry Priv, DTEK50 and DTEK60

Personal Projects

ESPower   **bit.ly/espower**
ESP8266 API, MicroPython, Python 3   *2017*
- Developed an IoT power bar exposed through a REST API using Micropython on the ESP8266 microcontroller

Cave Story Online   **bit.ly/cavstory**
C++, SDL, JavaScript, Emscripten   *2017*
- Made a web port of popular shareware game CaveStory with asm.js and WebAssembly

ReactionBot.js   **bit.ly/reactbot**
Node.js, Heroku, Express, PostgresSQL, Slack API   *2017*
- Created a Slack chatbot that allows users to share memes with 30+ engaged teams since release

Path Polo - Hack the North 2016   **bit.ly/pathpolo**
Android API, Java, Pebble API, Google Maps API   *2016*
- Built an Android and Pebble watch app to guide the visually impaired using haptic feedback

Interests

Functional Programming: Likes to tinker with Haskell, Clojure and Erlang/Elixir

European History: Avid medieval buff; Enjoys discussions on the middle ages